



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,568	09/05/2006	Jens-Peter Schlomka	DE 040073	7284
24737 7590 08/23/2007 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER SONG, HOON K	
			ART UNIT 2882	PAPER NUMBER
			MAIL DATE 08/23/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,568	Applicant(s) SCHLOMKA ET AL.	
	Examiner Hoon Song	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the focus point is at a distance from the source of radiation as claimed in claim 2 and a scatter angle between photons of the second radiation scattered at the location along the dimension from the radiation beam and the fan plane is constant as claimed in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 9 claim(s) a computer program. Computer programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory.

Claim Objections

Claim 3 is objected to because of the following informalities:

In claim 3, “it” should read --the radiation beam--.

Similar informality exist throughout the claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2882

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is meant by "a scatter angle between photons of the second radiation scattered at the location along the dimension from the radiation beam and the fan plane is constant". What is meant by a scatter angle between photons of second radiation and the fan plane is constant?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Harding (US 6470067B1).

Regarding claim 1, Harding teaches Coherent scatter computer tomography apparatus for examination of an object of interest, comprising:

- a source of radiation (S);
- a first radiation detector (160); and
- a second radiation detector (30);

wherein the source of radiation generates a radiation beam adapted to penetrate the object of interest in a fan plane (figure 1);

wherein the first radiation detector is arranged opposite to the source of radiation in the fan plane (figure 1);

wherein the first radiation detector is arranged to detect a first radiation of the radiation beam transmitted through the object of interest (figure 1);

wherein the second radiation detector is arranged opposite to the source of radiation with an offset from the fan plane in a direction normal to the fan plane (figure 1);

wherein the second radiation detector is arranged to detect a second radiation of the radiation beam scattered from a location in the object of interest (figure 1);

wherein at the location, the radiation beam has a dimension in the direction normal to the fan plane (figure 1);

wherein a scatter angle between photons of the second radiation scattered at the location along the dimension from the radiation beam and the fan plane is constant (figure 1).

Regarding claim 2, Harding teaches the radiation beam is focused at a focus point;

wherein the focus point is at a distance from the source of radiation; and

wherein the second radiation detector is arranged at the distance from the source of radiation (figure 1).

Regarding claim 3, Harding teaches a collimator (31);

wherein the collimator is arranged between the object of interest and the source of radiation;

wherein the collimator is adapted to collimate the radiation beam such that it is focused at a focus point being at the same distance from the source of radiation as the second radiation detector (figure 1).

Regarding claim 6, Harding teaches each of the first and second detectors comprises a line of detector elements, each of these lines being arranged in parallel to the fan plane (figure 1).

Regarding claims 7 and 9, Harding teaches a method of examining an object of interest with a coherent scatter computer tomography apparatus, the method comprising the steps of:

generating a radiation beam (41) penetrating the object of interest in a fan plane;
detecting (160) a first radiation of the radiation beam transmitted through the object of interest;

detecting (161) a second radiation of the radiation beam scattered from a location in the object of interest;

wherein the location has an offset from the fan plane in a direction normal to the fan plane (figure 1);

wherein at the location, the radiation beam has a dimension in the direction normal to the fan plane (figure 1);

wherein the radiation beam is generated such that a scatter angle between photons of the second radiation scattered at the location along the dimension from the radiation beam and the fan plane is constant (figure 1).

Regarding claim 8, Harding teaches collimating the radiation beam such that it is focused at a focus point having the same distance from a source of radiation as a point where the second radiation is detected (figure 1).

Claims 1, 6, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Komardin (US 6175117B1).

Regarding claim 1, 6, 7 and 9, Komardin teaches Coherent scatter computer tomography apparatus for examination of an object of interest, comprising:

- a source of radiation (20);

- a first radiation detector (38); and

- a second radiation detector (40);

wherein the source of radiation generates a radiation beam adapted to penetrate the object of interest in a fan plane (figure 1);

wherein the first radiation detector is arranged opposite to the source of radiation in the fan plane (figure 1);

wherein the first radiation detector is arranged to detect a first radiation of the radiation beam transmitted through the object of interest (figure 1);

wherein the second radiation detector is arranged opposite to the source of radiation with an offset from the fan plane in a direction normal to the fan plane (figure 1);

wherein the second radiation detector is arranged to detect a second radiation of the radiation beam scattered from a location in the object of interest (figure 1);

wherein at the location, the radiation beam has a dimension in the direction normal to the fan plane (figure 1);

wherein a scatter angle between photons of the second radiation scattered at the location along the dimension from the radiation beam and the fan plane is constant (figure 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harding in view of Ashe et al. (US 4096389).

Regarding claim 4, Harding fails to teach the collimator comprises a first plurality of high-Z material sheets and a second plurality of tapered plastic layers sandwiched between the first plurality of high-Z material sheets.

Ashe teaches the collimator (figure 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide CT system of Harding with the collimator as taught by Ashe, since the collimator would minimize radiation exposure and improve resolution in radiation imaging device.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/557668. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are anticipated by the claims of the patent.

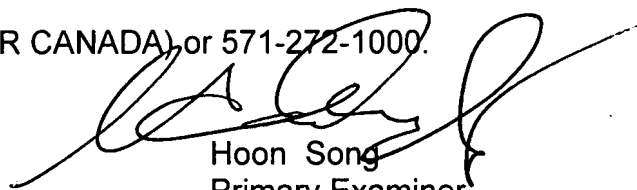
This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 9:30 AM - 7 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Hoon Song
Primary Examiner
Art Unit 2882

8/15/2007